Early pandemic forecast for Thailand M: multi-output M: multi-output M: repeated single-output (deaths + mobility) (deaths) (deaths) 2.0 2.0 2.0 per million of population Prediction Prediction Prediction Truth Truth Truth Death incidence 1.5 1.5 1.5 1.0 1.0 1.0 0.5 0.5 0.5 0.0 0.0 8 0 8 10 12 10 12 8 10 12 Days since April 22 2020 Days since April 22 2020 Days since April 22 2020 B: LSTM (deaths) B: Bi-LSTM (deaths) B: GRU (deaths + mobility) 2.0 2.0 2.0 per million of population Prediction Prediction Prediction Truth Truth Truth Death incidence 1.5 1.5 1.5 1.0 1.0 1.0 0.5 0.5 0.5 0.0 0.0 10 12 8 10 12 8 8 10 12 6 Days since April 22 2020 Days since April 22 2020 Days since April 22 2020 B: ARIMA wavelet **B**: Persistence 2.0 2.0 per million of population Prediction Prediction Truth Truth Death incidence 1.5 1.5 1.0 1.0 0.5 0.5 0.0 10 12  $\dot{0}$ 10 12 2 8 2 4 4

Days since April 22 2020

Days since April 22 2020